DOCUMENT RESUME

ED 045 265 RC 004 910

AUTHOR Maslow, Albert P.; Futransky, David L.
TITLE Effects on Test Score of Presenting Verbal Test Questions in an English-Spanish Format to a Predominantly Spanish-American Group; San Antonio, Texas, May 1968.
INSTITUTION Civil Service Commission, Washington, D.C. Bureau of Policies and Standards.
PUB DATE Jul 68
NOTE 11p.

EDRS PRICE EDRS Price MF-$0.25 HC-$0.65
DESCRIPTORS *Bilingualism, *Employment Opportunities, Federal Government, Job Applicants, *Language Handicaps, Language Research, Language Skills, *Mexican Americans, Spanish Speaking, Testing, *Tests

ABSTRACT

There is a continuing pressure on the U.S. Civil Service Commission to provide greater job opportunities for Spanish-surnamed persons. The commission has been urged to present recruiting literature, sample test material, and examination announcements in Spanish. This study investigated the effects of presenting verbal test material in an English-Spanish format to 307 postal clerk-carrier applicants in San Antonio, Texas. Sixty-two percent of the applicants indicated that they spoke Spanish at home or at work at least 25% of the time. Seventy-seven percent were high school graduates or had an equivalent education. The study indicated that, for persons educated in U.S. high schools, competence in written English is very likely to exceed or at least equal competence in written Spanish. The conclusions drawn from the investigation were (1) that providing bilingual test material for such groups is of little help and (2) that, in a few individual cases where the educational level is low and the commitment to Spanish is high, there is some improvement over an initially poor score. (FJ)

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EFFECTS ON TEST SCORE OF PRESENTING VERBAL TEST QUESTIONS IN AN ENGLISH-SPANISH FORMAT TO A PREDOMINANTLY SPANISH-AMERICAN GROUP

San Antonio, Texas, May 1968

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Prepared by:
Albert P. Maslow
David L. Futransky

PERSONNEL MEASUREMENT RESEARCH AND
DEVELOPMENT CENTER, STANDARDS DIVISION
BUREAU OF POLICIES AND STANDARDS
UNITED STATES CIVIL SERVICE COMMISSION

July 1968

RC004910

Summary

This study investigated the effects on test score of presenting verbal test material in an English and Spanish format. The population consisted of 307 Postal Clerk-Carrier applicants in San Antonio, Texas. Sixty-two percent of the group indicated that they spoke Spanish at home or at work at least 25% of the time. Seventy-seven percent were high school graduates or its equivalent.

For groups educated in U. S. high schools, competence in written English is very likely to exceed or at least equal their competence in written Spanish.

- Consequently for such groups providing bilingual test material is of little help.

- In a few individual cases, where the educational level is low and the commitment to Spanish high, some improvement over an initially poor score is achieved.

The lack of improvement in using the English-Spanish format would not necessarily apply in places such as Puerto Rico where schooling is in a Spanish environment or for jobs for which the applicant population is drawn from the more poorly educated and has a very high commitment to use of Spanish.

I. Background

There is continuing pressure on the Civil Service Commission by various community action groups to provide greater job opportunities for Spanish surnamed persons. The Commission has taken some steps in that direction in line with its program to improve its informational service to all segments of the work force. For example, it has made use of the Spanish language in recruiting literature, in sample test material and in examination announcements. The further step of presenting the test questions in English-Spanish has also been urged based on the belief that the present tests inadequately measure the abilities of the Spanish surnamed competitors because of the language demands of the tests and that if the test questions were given in both English and Spanish, the language obstacle would presumably be avoided. A small-scale study along these lines was made by William Jasper in the San Francisco Region for a group of applicants for the Clerk-Carrier examination which indicated that providing test material in English and Spanish made little difference in test performance. Because of the critical nature of the issue, it was decided to carry out a larger scale study.

The Clerk-Carrier examination is a particularly good vehicle to use in the study since it is a nationwide program which provides a substantial number of entry level jobs at a reasonably good salary. If it worked here a considerable payoff in job opportunities could result. The plan was to put the verbal section of the Clerk-Carrier tests into an English-Spanish format and try it out in San Antonio, Texas, where Mexican-Americans make up a substantial part of the applicant population.

II. Description of the Test

The experimental edition of the new Clerk-Carrier battery made up of Address Checking, Memory, Number Series and Verbal questions was used. The Verbal section was translated in the Central Office by an employee, fluent in Spanish, who had been raised and educated in the Southwest. His drafts were sent to Dallas for review to double check their suitability for use in that area. A third and fourth review were made by a professional translator and by a psychologist familiar with test construction to insure that English and Spanish versions were equivalent as judged by expert opinion.

III. Population Tested

The participants were 307 Clerk-Carrier applicants who appeared for testing on May 27, 28, and 29, 1968, in San Antonio, Texas. They represented 50% of the persons scheduled, about the normal "show" rate. All persons scheduled had been sent an English-Spanish version of the sample questions. A short questionnaire provided a few basic facts as to the sex, age, education and the extent of commitment to use of Spanish (copy of questionnaire attached). These are summarized below:

Extent to which Spanish is Spoken at Home or at Work	High (3/4 or more of the time)	34%
	Medium (1/2 to 1/4 of the time)	28%
	Low (None or very little)	38%
	Total	100%

Education	Less than H. S. graduate	23%
	H. S. grad. or equiv.	77%
	Total	100%

Age	-19	30%
	20-29	50%
	30-39	13%
	40+	7%
		100%

Sex	Male	69%
	Female	31%
		100%

The San Antonio group represents a "good" applicant population. It is fairly young with a median age under 25 and only 20% 30 or over. Seventy-seven percent are high school graduates or have earned its equivalent, such as GED certificates. The quality of the population is demonstrated by the fact that the eligibility rate in San Antonio has been 60-64%. This compares favorably with most areas of the country. Apparently, Post Office jobs are still attractive in this part of the country to the young high school graduate. Nevertheless, the extent of Spanish usage made this a suitable study group.

IV. Study Plan

The effect on test performance of providing English-Spanish material was to be evaluated on the basis of the scores on the 30 verbal items--20 vocabulary and 10 reading. Three different arrangements of the 30 items were assembled and labeled Series A, B, and C.

Series A — The 30 questions are given first in English and then repeated in English-Spanish where each question appears in both languages side by side on the test page.

Series B — The 30 questions are given first in English as in Series A but then repeated again in English. This is to provide a measure of how much gain results by just repeating the same questions. (Competitors who took Series B were invited to take the English-Spanish version later but none felt it necessary.)

Series C — The 30 questions are given first in the English-Spanish format and then repeated in English only.

The three series were interleafed in packaging in the ratio of 4 A's to one B and one C, and distributed in the examination room as packaged to give a random distribution of series. Complete tests and questionnaires were obtained for 307 competitors in the following numbers:

Series A -	205	English-English/Spanish
B -	51	English-English
C -	51	English/Spanish-English

The time limit of 30 minutes for each administration of the 30 verbal items enabled all but very few to try all the items in both the initial test and the retests.

V. Results

Is there a gain in score on English-Spanish test material?

Table 1 summarizes the group results means and (standard deviations) for the two administrations of each of the three series, maximum score = 30.

Table 1

Mean and Standard Deviation by Series

		Series A (N=205)	Series B 1/ (N=51)	Series C (N=51)
Administration	1st	Eng. 18.8 (5.7)	Eng. 17.7 (5.5)	Eng.- Span. 18.8 (4.4)
	2nd	Eng.- Span. 19.1 (5.5)	Eng. 17.9 (5.7)	Eng. 18.8 (4.8)
Difference		+.3	+.2	0

The data in Table 1 show the change in scores between the 1st and 2nd administration for each of the three series. The lack of any significant improvement in the mean scores for Series A supports the position that for these competitors as a group the English-Spanish format was of no advantage. In other words persons who took Series A for all practical purposes did no better than those taking Series B in which the same 30 questions are repeated in English.

In Jasper's study two samples of competitors were compared on a single administration of English and English-Spanish test material. One group took English only and the other group took the English-Spanish version.

A comparable comparison can be made here by combining those who took Series A and Series B in which the first administration is in English with those who took Series C in which the first administration is in English-Spanish.

The mean score for the combined Series A and Series B groups is 18.6, for the group taking Series C the mean is 18.8. As in Jasper's study, the difference is of no consequence for the groups as a whole.

Is the value of English-Spanish material dependent on education and extent of use of Spanish?

It is reasonable to assume that those likely to be helped most by the Spanish material would be those who were not highly educated in English and who had a heavy commitment to Spanish. The relatively high level of schooling of this competitor population would tend to lessen the value of the Spanish material and therefore individual instances of substantial improvement could be obscured by the group effect. To explore this issue, the "A" Series competitors (Eng./English-Spanish) was subdivided on the basis of education and the extent to which the competitor spoke Spanish at home or at work.

1/ The correlation (r) between the first and second administrations of Series B is .95.

Table 2 shows the mean test scores for the several combinations of education and extent of Spanish spoken.

Table 2

Test Performance of Subgroups of Those Taking Series A

	N	Administration		Diff.	Standard error of Diff.
		1st (Eng.)	2nd (Eng.-Span.)		
a) H. S. Grad.-Spanish High	51	17.8	18.1	+.3	.3
b) Non-H. S. Grad.-Spanish High	19	12.5	13.2	+.7	.6
c) H. S. Grad.-Spanish Medium	36	19.3	19.9	+.6	.3
d) Non-H. S. Grad.-Spanish Medium	15	17.3	17.1	-.2	.5
e) H. S. Grad.-Spanish Low	76	21.3	21.5	+.2	.2
f) Non-H. S. Grad.-Spanish Low	8	16.8	16.9	+.1	.5

The gains are not impressive and confirm the conclusion from Table 1 that the Spanish material adds little to the test performance for these competitors. However the data do show that high school graduates, lines a, c and e, do better than non-high school graduates, lines b, d and f, and that extensive use of Spanish is associated with poorer test performance for persons with the same level of education. The highest performance group comprises the high school graduates who speak either very little or no Spanish (line e); the lowest performance, the "less than high school graduates" who speak Spanish extensively (line b).

In summary, those who did poorly in English tended to repeat their poor performance even when the material was available in Spanish.

Are there many individuals who profit greatly from Spanish test material?

Another way of looking at the data is to study the changes in test score by individuals. An increase of 4 points or more can be regarded as substantially outside the range of what could be expected (1% level) by simply repeating the test. 2/

2/ The standard error of measurement of an individual's score as established from Group B is 1.3 points.

Table 3

Number Making the Specified Changes in Test Score between 1st and 2nd Administration by degree of use of Spanish

Series	Use of Spanish	N	Change in score points		
			(-4) or more	(-3) — (+3)	(+4) or more
A	High	70	2	63	5
	Med.	51	1	46	4
	Low	84	—	82	2
	All	205	3	191	11
B	All	51	2	48	1

For the 51 who repeated the English twice (Series B), 1 person increased his score by 4 or more points and 2 persons decreased theirs by 4 or more points.

Among the 205 who took Series A, the English first and then the English-Spanish, 11 persons increased their score by 4 or more points, 3 persons decreased it by same amount. Eleven persons gaining 4 score points are more than would be expected by chance among a group of 205. These persons were primarily from among those who had indicated a "medium" to "high" use of Spanish. (An unexpected illustration of this finding is that the largest increase of all points was made by a Mexican national, who had recently immigrated to the U. S.) In terms of individual gains, the data indicate that for a few persons providing the questions in Spanish is helpful. However this help is relatively minimal when the population is predominantly young high school graduates.

VI. Comment and Conclusion

A sizable difference apparently exists between the group's knowledge of Spanish as an oral language and Spanish as a written language. About 50% indicated that they spoke Spanish "without difficulty," whereas only 15% indicated they could read and understand a Spanish newspaper "without difficulty." Even this 15%, with few exceptions, rated themselves better able to read and understand a newspaper in English than in Spanish. Apparently, many speak colloquial Spanish ("Tex-Mex") at home or on the street or at work, but have little occasion to use the written language. This suggests why for such groups little gain can be expected by providing written material in both English and Spanish over what is achieved by English alone.

Perhaps the answer to the language problem in the tests depends on our efforts to keep the language level in line with language demands of the job both in terms of job tasks and in terms of the other demands on the employee to communicate in English in the work environment. In that way, ability to use the English language becomes a job related requirement and its measure can be justified on the same basis as any other ability essential to performing the job. To carry this principle into practice, in the new Clerk-Carrier test, the verbal score requirement is set at the minimum language level sufficient to meet job demands.

This study, as well as others, supports the conclusion that if the competitive population is predominantly made up of persons educated in U. S. high schools (not necessarily H. S. graduates) their competence in written English is very likely to exceed or at least equal their competence in written Spanish. For such groups, (typical of Clerk-Carrier applicants) presenting test questions in Spanish is of negligible value.

QUESTIONNAIRE FOR APPLICANTS FOR EMPLOYMENT IN THE POSTAL SERVICE

The Civil Service Commission is studying ways to make its examinations as fair as possible for all competitors. Your answers to the questions will help us in this work. Your answers will not affect your rating or your chances for a job in any way. They will be used by the CSC for research studies only. However, if there are any questions you do not wish to answer, you may leave them blank. Please fill out the questionnaire carefully. Thank you.

CUESTIONARIO PARA CANDIDATOS A EMPLEOS EN EL SERVICIO POSTAL

La Civil Service Commission está buscando la forma de preparar y dar sus exámenes con la mayor justicia posible para todos los candidatos. Sus respuestas a las preguntas nos ayudarán en esta tarea. Sus respuestas no afectarán en forma alguna ni su calificación ni sus oportunidades de obtener un empleo. La CSC las utilizará única- y exclusivamente en estudios científicos. Sin embargo, si hubiera alguna pregunta que usted no deseara contestar, puede dejarla en blanco. Le rogamos que llene el cuestionario cuidadosamente. Muchas gracias.

1. Name: _____

2. Place of birth:

☐ U.S.A. ☐ Mexico ☐ other

3. Sex:

☐ Male ☐ Female

4. Age:

☐ 19 or less
☐ 20-29
☐ 30-39
☐ 40-49
☐ 50-59
☐ 60 or older

5. Highest grade in school completed <u>inside</u> the United States:

☐ Did not attend any school inside the United States
☐ 6th grade or less
☐ 7th, 8th or 9th grade
☐ 10th, 11th or 12th grade but did <u>not</u> graduate from high or secondary school
☐ High school graduate, its equivalent or higher

GO TO #6

6. Highest grade in school completed <u>outside</u> of the United States:

☐ Did not attend school outside of the United States
☐ 6th grade or less
☐ 7th, 8th or 9th grade
☐ 10th, 11th or 12th grade but did <u>not</u> graduate from high school
☐ High school graduate, its equivalent or better

7. How much Spanish do you speak?

A. In your home--

☐ Very little
☐ About 1/4 of the time
☐ About 1/2 of the time
☐ About 3/4 of the time
☐ Almost all the time

B. <u>Outside</u> of home (including at work)--

☐ Very little
☐ About 1/4 of the time
☐ About 1/2 of the time
☐ About 3/4 of the time
☐ Almost all the time

CONTINUE TO NEXT PAGE

8. How do you rate your knowledge of Spanish?

A. Read and understand a Spanish newspaper--

- with much difficulty ☐
- with some difficulty but can get by ☐
- with no difficulty at all ☐

B. Speak Spanish--

- with much difficulty ☐
- with some difficulty but can get by ☐
- with no difficulty at all ☐

C. Carry on a conversation with someone who speaks and understands only Spanish--

- with much difficulty ☐
- with some difficulty but can get by ☐
- with no difficulty at all ☐

9. How do you rate your knowledge of Spanish as compared with your knowledge of English?

A. Read and understand a newspaper--

- in Spanish better ☐
- about the same ☐
- in English better ☐

B. Speak--

- Spanish better ☐
- about the same ☐
- English better ☐

C. Carry on a conversation--

- in Spanish better ☐
- about the same ☐
- in English better ☐

8. Como clasificaría sus conocimientos de español?

A. Leer y comprender un diario en español--

- con mucha dificultad
- con cierta dificultad pero se desenvuelve
- sin ninguna dificultad

B. Hablar español--

- con mucha dificultad
- con cierta dificultad pero se desenvuelve
- sin ninguna dificultad

C. Conversar con alguien que hable y comprenda únicamente español--

- con mucha dificultad
- con cierta dificultad pero se desenvuelve
- sin ninguna dificultad

9. Cómo clasificaría sus conocimientos de español si los compara con sus conocimientos de inglés?

A. Leer y comprender un diario--

- mejor en español
- aproximadamente igual
- mejor en inglés

B. Hablar--

- mejor en español
- aproximadamente igual
- mejor en inglés

C. Conversar--

- mejor en español
- aproximadamente igual
- mejor en inglés